

In The Specification:

Please correct paragraph 0017 as follows:

[0017] Compensation circuit 12 includes an inverting circuit 26 that has an input 28 coupled to the electrical output 16 of audio system 14 and therefore to the input of speaker 16. To filter out any DC offset, capacitor C_1 may be employed. Capacitor C_1 is coupled to input 28 and to a resistor R_1 . Resistor R_1 is coupled between capacitor C_1 and the inverting terminal 30 of an operational amplifier 32. Inverting terminal 30 of operational amplifier 32 may also be coupled to a feedback resistor R_2 which in turn is coupled to an output 34 of operational amplifier 32. Operational amplifier 32 may also have a non-inverting terminal 36 coupled to a resistor R_3 which in turn is coupled to a reference voltage $\frac{V_{cc}}{2}$.

[0018] By properly choosing the resistance values of R_1 , R_2 , and R_3 , an inverted electrical signal is generated at output 34. In one constructed embodiment, the resistors R_1 , R_2 , R_3 are equal to obtain unity gain and was set to $R_1/2$. By way of example, R_1 and R_2 may be 100k ohms and R_3 may be 50K ohms. The capacitor is sized to block DC offset and thus depends on the input to which it is attached. Capacitor C_1 may, for example, be 1uF. Of course, the resistor values may be chosen to amplify the signals as well. Output 34 may be electrically coupled to a delay circuit 40. Delay circuit 40 is an optional feature that is used to align the inverting signal temporally with the output of the sensor. Various types of circuits may be used for delay circuit 40. Such circuits are well known to those skilled in the art. The delay circuit generates a delay signal that is added to the inverted electrical signal from the output 34 of operational amplifier 32. The delayed inverted output signal is coupled to controller 24. Controller 24 combines the inverted electrical signal and the sensor output signal to form a compensated output signal at an output 42 of controller 24. Of course, controller 24 may also use the compensated signal therein. Controller 24 may merely add the two signals together to form the compensated electrical output.

[0018] Referring now to Figure 2, a plot of the normal sensor output versus time is illustrated.

[0019] In Figure 3 the subwoofer output versus time is illustrated. This signal is the electrical output of the audio system.

[0020] Figure 4 includes the sensor output that has been affected by the subwoofer output. When the electrical output of the audio system is inverted and added to Figure 4, the compensated output signal of the present invention is thus similar to that of Figure 2.

[0021] Advantageously, the present invention does not rely on the positioning of a microphone or other transducer device directly adjacent to the speaker. Thus, for automotive applications increased flexibility is achieved in applying the compensation circuit of the present invention.

[0022] While particular embodiments of the invention have been shown and described, numerous variations and alternate embodiments will occur to those skilled in the art. Accordingly, it is intended that the invention be limited only in terms of the appended claims.